WHAT IS CLAIMED IS:

1. A process for the preparation of an α-haloenamine, the process comprising combining a tertiary amide with a pentavalent phosphorous halide in a solvent to form an α-haloiminium salt and converting the α-haloiminium salt to the α-haloenamine with a base, the pentavalent phosphorous halide having the formula

$$P(X)_2(Z)_3$$

wherein each X is independently a halogen atom and each Z is independently a halogen atom or a carbon atom which is part of a substituted or unsubstituted hydrocarbyl radical.

2. The process of claim 1 wherein the base is a tertiary amine.

3. The process of claim 1 wherein the base is triethylamine.

4. The process of claim 1 wherein the α-haloenamine is an α-chloroenamine, α-bromoenamine, α-fluoroenamine or α-iodoenamine.

5. The process of claim 1 wherein the pentavalent phosphorous halide is phosphorous pentachloride or phosphorous pentabromide.

6. The process of claim 1 wherein the pentavalent phosphorous halide is phosphorous pentachloride.

7. The process of claim 1 wherein the α-haloenamine is α-chloroenamine, α-bromoenamine, or α-iodoenamine and the process comprises combining a tertiary amide with phosphorous pentachloride or phosphorous pentabromide.

8. The process of claim 1 wherein the process comprises combining a tertiary amide with phosphorous pentachloride to form an α-chloroenamine and displacing the chloride of the α-chloroenamine with bromide, fluoride or iodide.

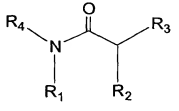
9. The process of claim 1 wherein the solvent comprises acetonitrile.

10. The process of claim 1 wherein the tertiary amide is covalently linked to a support which enables physical separation of the α-haloenamine from a liquid composition.

11. The process of claim 10 wherein the support is inorganic, the inorganic support being selected from the group consisting of silicates, quartz and aluminum.

12. The process of claim 10 wherein the support is polymeric.

13. The process of claim 10 wherein the tertiary amide is a tertiary amide reagent having the formula:



wherein

R_1 and R_4 are independently hydrocarbyl, substituted hydrocarbyl, hydrocarbyloxy, or substituted hydrocarbyloxy; and

R_2 and R_3 are independently hydrogen, hydrocarbyl, substituted hydrocarbyl, hydrocarbylthio, substituted hydrocarbylthio, hydrocarbylcarbonyl, substituted hydrocarbylcarbonyl, hydrocarbyloxycarbonyl, substituted hydrocarbyloxycarbonyl, phosphinyl, thiophosphinyl, sulfinyl, sulfonyl, halo, cyano, or nitro,

provided at least one of R_1, R_2, R_3 and R_4 comprises a support which enables physical separation of the tertiary amide from a liquid mixture.

14. The process of claim 13 wherein three of R_1, R_2, R_3 and R_4 are alkyl.

15. The process of claim 13 wherein two of R_1, R_2, R_3 and R_4 in combination define a carbocyclic or heterocyclo ring.

16. The process of claim 13 wherein three of R_1, R_2, R_3 and R_4 are alkyl and the other is covalently linked to a polymeric support.

17. The process of claim 13 wherein the tertiary amide reagent is poly(N,N-disubstituted acrylamide).

18. The process of claim 13 wherein the tertiary amide reagent is a polymer having N,N-disubstituted amide moieties.

19. The process of claim 13 wherein the tertiary amide reagent is a polymer having N,N-dialkyl substituted amide moieties.

20. The process of claim 13 wherein the amide moiety of the tertiary amide reagent is covalently attached to the phenyl ring of a polystyrene polymer or copolymer through one of R^1, R^2, R^3 or R^4.